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ABSTRACT

This study was designed to determine if the Cooperative School and College Ability Test (SCAT) can predict future college academic success of Negro college students with the same degree of accuracy as it does for white college students and to discover if the sex factor need be considered in making predictions. The sample consisted of 180 Negroes matched with whites on the basis of sex, college, and year in school. A correlation coefficient was computed between the SCAT total score and cumulative grade point average (GPA) and between the high school rank and GPA. The Negro means were significantly lower than the white means for each variable except high school rank. In the Negro female group coefficients were generated that are normally expected with college GPA. No correlation was evidenced in the Negro male group. It is hypothesized that sex is an important consideration when making academic predictions for college students. It is concluded that the SCAT Total does exhibit "cultural bias" and that it is inappropriate to make academic decisions concerning the Negro male student on the basis of his SCAT Total score. (RM)

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"A COMPARISON OF NEGRO AND WHITE STUDENTS USING THE SCAT IN PREDICTING COLLEGE GRADES"

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In questioning the value of using a standardized ability test in predicting future academic success of Negro students in a college environment, several other questions came into focus: (a) Does the test exhibit the so-called "cultural bias" when one is testing primarily the upper strata, academically speaking, of the Negro population? (b) Does a difference in ability to score well exist? If so, does this difference affect the test's predictive validity? (c) Should the sex of the individual be considered in making academic predictions?

There is evidence from previous studies to suggest that certain standardized tests predict freshman grade point averages for Negroes in Negro colleges about as well as they do for whites in predominately white colleges. Stanley and Porter (1967) compared the relationship of the Scholastic Aptitude Test- Verbal (SAT-V) and the Scholastic Aptitude Test-Math (SAT-M) scores with freshman grades in three predominately Negro southern state colleges and also with several predominately non-Negro institutions in the same geographical area. They found that SAT- V and SAT-M scores correlated rather well with freshman grades in the three Negro colleges, as well as in the non- Negro colleges. This data and the

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several studies that they reviewed indicated that the SAT-type test scores are as valid for Negroes as for non- Negroes if the Negroes are competing with Negroes and being taught chiefly by Negroes. In the same study, reference was made to Cleary's (1966) research on the topic, in which it was reported that academic prediction for Negroes may be approximately equal for the races within integrated colleges.

However, Clark and Plotkin (1963) state that the predictive value of intelligence tests administered in high school is not high and also that scholastic aptitude test scores are not clearly associated with college grades among Negro students in integrated colleges.

There is substantial evidence that Negroes, on the average, do not perform as well as whites on standardized tests. (Shuey, 1966) His generalization was tested in the present research to determine if it could be applied at the college level. At the University of Illinois, Champagne- Urbana campus, it was found that the non- Negro freshman placement test mean was more than one standard deviation above the Negro test mean of 100 Negro men students. Only Negro men were included in the sample, but it did represent a college environment which is predominately white. It also indicated that those Negro male students whose American College Test (ACT) scores indicated adequate college preparation did as well as others. (Bindman, 1963)

The purpose of this paper was to determine if the Co-operative School and College Ability Test (referred to as SCAT)

is able to predict future college academic success with the same degree of accuracy that it predicts the academic success of white college students in a predominately white environment. The SCAT has been correlated with college GPA in numerous research projects and these correlations range from about .40 to .60. (Buros, 1965) An additional purpose of the study was to discover if the sex factor need be considered in making predictions. Clark and Plotkin stated that not only are there more Negro women than Negro men in the college population, (the reverse is true with respect to the white population), but the Negro women also tend to complete college more frequently and to earn higher grades.

Procedure and Findings

The Negro sample was selected from those undergraduate students in attendance at the University of Missouri- Columbia during the school year 1968- 69. The SCAT is routinely administered to all entering freshmen as part of a placement battery, therefore test scores were available on all of the students included in the sample. By this method, it was established that no transfer students were included as part of the sample. The number of Negro students in the sample was 180. (38 male freshmen, 29 male upperclassmen, 50 female freshmen and 63 female upperclassmen) This figure represented a small number of the total student population on campus, (in excess of 20,000) but a high percentage of the Negro undergraduate students on campus. (No exact figure of the total number of Negro undergraduate students was available.)

The white students were matched with the Negro students on the basis of sex, college or school, and year in school. The test scores of all freshmen are listed by year in alphabetical order. In matching the Negro sample, the procedure was to start in the alphabet with the same last initial of the student being matched, and procede through the list until the first person to meet the established criteria was encountered. If this person was still in school he was selected as part of the matched sample. This procedure was followed until all Negro students were matched with non-Negro students. After the matching was completed, a correlation coefficient was computed between the SCAT Total score and the cumulative grade point average (GPA). This procedure was repeated using the high school rank (T score) and GPA. As indicated on Table 1, the correlation coefficients of the Negro males did not significantly differ from zero. The lone exception occurred when Negro male freshmen and Negro male upper classmen were combined and the total Negro male population did reach significance at the .05 level.

Insert Table 1 about here

In evaluating the data, a mean and standard deviation was calculated for each group and on each variable. The results of these calculations are found in Table 2. An Alpha level of .05 was set, and T tests were computed for each of

the comparisons. In comparing the Negro students with their matched samples, the Negro means were significantly lower in each grouping and on each variable except high school rank. The high school rank mean for upper class Negro females was higher than the corresponding mean; otherwise there was no difference.

Insert Table 2 about here

In comparing males and females of the same race and same educational level, the only difference encountered was that females had significantly higher class ranks than males in each case except that of the white upper class group and there no difference existed. A higher male GPA of upper classmen was the only difference found in the white group when comparing freshmen with upper class. But in the Negro groups significant differences were found in each case on each variable in favor of the upper classmen. The lone exception was the male SCAT score in which no difference was found.

Discussion

In the present study the data supported the view that Negro students do not score as well as white students on standardized tests. This appears true even at the college level. The mean test scores for the Negro male and female groups were significantly lower than the corresponding white groups, although the means did not differ from each other within each

racial group.

In computing correlation coefficients for the Negro females using the SCAT with GPA, and high school rank with GPA, coefficients were generated that are normally expected with college GPA. However, when the Negro male coefficients were computed, no correlation was evidenced. Therefore, apparently sex is an important consideration when making academic predictions for college students.

Clark and Plotkin suggested that standardized tests were not appropriate for predicting academic success for Negro students; rather, that motivation was a more important consideration. This view cannot be supported or refuted at this point, but more investigation is needed in view of the fact the SCAT Total score used in the current study had no correlation with academic success in the case of Negro males.

The Negro females out-numbered the Negro males almost 2 to 1 in this study, supporting the view that there are more Negro females in higher education than Negro males. The grade differential in this case was not significantly different.

In summary, it might be said that the SCAT Total does exhibit the so-called cultural bias. Therefore, it would seem inappropriate for the University of Missouri to make academic decisions concerning the Negro male student on the basis of his SCAT Total score.

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TABLE 1

A Comparison of Correlation Coefficients of SCAT Total (Raw Score) and Cumulative GPA; High School Rank (T) and Cumulative GPA between Negro and White College Students

	Male						Female						Total					
	Freshmen		Upper Class		Total		Freshmen		Upper Class		Total		Freshmen		Upper Class		Total	
	N	W	N	W	N	W	N	W	N	W	N	W	N	W	N	W	N	W
SCAT	.09	.44*	.07	.64*	.14	.52*	.50*	.34*	.38*	.67*	.52*	.51*	.30*	.38*	.30*	.65*	.38*	.49*
HSR	.21	.60*	.00	.70*	.24*	.64*	.41*	.46*	.25*	.56*	.41*	.49*	.34*	.54*	.24*	.61*	.39*	.57*
N=	38		29		67		50		63		113		88		92		180	

N= Negro

W= White

* p < .05

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TABLE 2

A Comparison of the Mean and Standard Deviation
of the SCAT Raw Score, the High School Rank T Score, and
the Cumulative GPA between Negro and White College Students

	SCAT				High School Rank (T)				Grade Point Average			
	Mean		SD		Mean		SD		Mean		SD	
	N	W	N	W	N	W	N	W	N	W	N	W
Male												
Freshmen	62.1	78.46	15.3	14.31	46.7	49.26	8.40	10.78	1.54	2.16	.70	.71
Upper	67.1	81.66	15.3	12.71	52.8	52.24	8.45	9.63	2.00	2.57	.32	.60
Total	64.2	79.81	15.5	13.72	49.3	50.55	8.98	10.40	1.73	2.33	.61	.70
Female												
Freshmen	58.4	79.07	16.0	12.69	51.2	53.42	8.90	6.29	1.78	2.58	.71	.75
Upper	70.6	78.95	14.2	12.93	57.9	54.00	9.41	8.44	2.23	2.58	.39	.55
Total	65.0	78.94	16.2	12.97	55.0	53.73	9.85	7.79	2.02	2.58	.60	.65
Total												
Freshmen	60.0	78.81	15.8	13.40	49.3	51.68	8.97	8.98	1.68	2.40	.71	.76
Upper	69.5	79.92	14.7	12.91	56.5	53.45	9.50	8.87	2.15	2.58	.38	.57
Total	64.6	79.37	16.2	13.17	53.0	52.55	9.99	8.99	1.91	2.49	.62	.68

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